What is claimed is:

1. A combination type stator core applicable to an electric rotary machine which is composed of a plurality of electromagnetic steel plates being multilayered so as to have a cylindrical yoke with numerous recessed portions arranged at predetermined pitches in a circumferential direction and each opened toward an inner radial direction and a teeth block extending toward the inner radial direction with protruding portions coupled or fitted into said recessed portions of said yoke, wherein

one or more teeth fixing pins are provided to fix said teeth block to said yoke;

said yoke comprises first annular plates defining said recessed portions being opened toward both axial directions as well as toward the inner radial direction and second annular plates being disposed next to said first annular plates at axial end thereof and each having a shielding plate portion for shielding said recessed portions of said first annular plates in a lamination direction of said multilayered electromagnetic steel plates;

said teeth block comprise first teeth defining said protruding portions inserted in the radial direction and fitted into said recessed portions and second teeth each being disposed next to said first teeth in the axial direction so as to be brought into hermetical contact with a cylindrical surface of said second annular plates; and

said teeth fixing pin is inserted in through-holes of said shielding plate portions of said second annular plates and through-holes of said protruding portions of said second teeth which are overlapped with each other in the lamination direction.

2. The combination type stator core applicable to an electric rotary machine in accordance with claim 1, wherein said recessed portions and said protruding portions being fitted into said recessed portions are provided as a

plurality of pairs and disposed in such a manner that said recessed portions are independent from each other in the lamination direction and also said protruding portions are independent from each other in the lamination direction.

3. The combination type stator core applicable to an electric rotary machine in accordance with claim 2, wherein a circumferential width of a radial end portion of said protruding portion is 98% or more of a circumferential width of a radial opening portion of said recessed portion.

4. The combination type stator core applicable to an electric rotary machine in accordance with claim 3, wherein the circumferential width of said protruding portion continuously increases with increasing distance from said radial end portion toward the inner radial direction, and the circumferential width of said recessed portion continuously decreases with increasing distance from said radial opening portion toward an outer radial direction.

5. The combination type stator core applicable to an electric rotary machine in accordance with claim 2, wherein an end portion of said teeth fixing pin is flattened by plastic deformation after said teeth fixing pin is inserted into said through-holes.

6. The combination type stator core applicable to an electric rotary machine in accordance with claim 2, wherein said first annular plates and said second annular plates are welded together, and said first teeth and said second teeth are welded together.

7. The combination type stator core applicable to an electric rotary machine in accordance with claim 6, wherein the welded portion of said first

teeth and said second teeth is offset from said teeth fixing pin by a predetermined distance in the radial direction and is located at the same position in the circumferential direction.

8. The combination type stator core applicable to an electric rotary machine in accordance with claim 2, wherein said first annular plates, said second annular plates, said first teeth, and said second teeth are constituted by a plurality of electromagnetic steel plates being multilayered.

9. The combination type stator core applicable to an electric rotary machine in accordance with claim 1, wherein punch-out portions extending in the lamination direction and continuous with each other are formed in said first annular plates and said second annular plates or in said first teeth and said second teeth.

10. The combination type stator core applicable to an electric rotary machine in accordance with claim 1, wherein a terminal base for processing a coil end is fixed to one end surface of said yoke by means of said teeth fixing pin.

11. The combination type stator core applicable to an electric rotary machine in accordance with claim 1, wherein said teeth fixing pin is a plurality of pins spaced in the radial direction by a predetermined distance and located at the same position in the circumferential direction.

12. The combination type stator core applicable to an electric rotary machine in accordance with claim 1, wherein a first tooth or a second tooth is connected to other first tooth or other second tooth neighboring in the circumferential direction via an overhanging flange which extends from an inner end of said first tooth or said second tooth so as to close a slot.

13. The combination type stator core applicable to an electric rotary machine in accordance with claim 1, wherein said protruding portions and said recessed portions are constituted by a plurality of electromagnetic steel plates being multilayered.

14. The combination type stator core applicable to an electric rotary machine in accordance with claim 1, wherein said yoke includes a plurality of recessed portions being overlapped at predetermined intervals in the axial direction, said teeth block includes a plurality of protruding portions being overlapped at predetermined intervals in the axial direction and being respectively inserted into said recessed portions of said yoke, and a ratio of a total width of said protruding portions in the axial direction to a total width of said recessed portions in the axial direction is in a range from 0.8 to 1.2.

15. The combination type stator core applicable to an electric rotary machine in accordance with claim 1, wherein

said recessed portion and said protruding portion being inserted into said recessed portion are configured into rectangular shape when seen from the axial direction,

a convex corner of said protruding portion and a concave corner of said recessed portion being fitted to each other are chamfered, and

a ratio Rx/Ry is in a range from 1.0 to 1.5, where Rx represents a curvature radius of said convex corner of said protruding portion and Ry represents a curvature radius of said concave corner of said recessed portion.

16. A combination type stator core applicable to an electric rotary machine which is composed of a plurality of electromagnetic steel plates being multilayered so as to have a cylindrical yoke with numerous recessed portions arranged at predetermined pitches in the circumferential direction

and each opened toward an inner radial direction and a teeth block extending toward the inner radial direction with protruding portions coupled or fitted into said recessed portions of said yoke, wherein

said yoke comprises first annular plates defining said recessed portions being opened toward both axial directions as well as toward the inner radial direction and second annular plates being disposed next to said first annular plates at axial end thereof and each having a shielding plate portion for shielding said recessed portions of said first annular plates in a lamination direction of said multilayered electromagnetic steel plates;

said teeth block comprise first teeth defining said protruding portions inserted in the radial direction and fitted into said recessed portions and second teeth each being disposed next to said first teeth in the axial direction so as to be brought into hermetical contact with a cylindrical surface of said second annular plates; and

said recessed portions and said protruding portions being fitted into said recessed portions are provided as a plurality of pairs and disposed in such a manner that said recessed portions are independent from each other in the lamination direction and also said protruding portions are independent from each other in the lamination direction.

17. The combination type stator core applicable to an electric rotary machine in accordance with claim 16, wherein punch-out portions extending in the lamination direction and continuous with each other are formed in said first annular plates and said second annular plates or in said first teeth and said second teeth.

18. The combination type stator core applicable to an electric rotary machine in accordance with claim 16, wherein a terminal base for processing a coil end is fixed to one end surface of said yoke by means of said teeth fixing pin.

19. The combination type stator core applicable to an electric rotary machine in accordance with claim 16, wherein a first tooth or a second tooth is connected to other first tooth or other second tooth neighboring in the circumferential direction via an overhanging flange which extends from an inner end of said first tooth or said second tooth so as to close a slot.

20. The combination type stator core applicable to an electric rotary machine in accordance with claim 16, wherein said protruding portions and said recessed portions are constituted by a plurality of electromagnetic steel plates being multilayered.

21. The combination type stator core applicable to an electric rotary machine in accordance with claim 16, wherein said yoke includes a plurality of recessed portions being overlapped at predetermined intervals in the axial direction, said teeth block includes a plurality of protruding portions being overlapped at predetermined intervals in the axial direction and being respectively inserted into said recessed portions of said yoke, and a ratio of a total width of said protruding portions in the axial direction to a total width of said recessed portions in the axial direction is in a range from 0.8 to 1.2.

22. The combination type stator core applicable to an electric rotary machine in accordance with claim 16, wherein

said recessed portion and said protruding portion being inserted into said recessed portion are configured into rectangular shape when seen from the axial direction,

a convex corner of said protruding portion and a concave corner of said recessed portion being fitted to each other are chamfered, and

a ratio Rx/Ry is in a range from 1.0 to 1.5, where Rx represents a curvature radius of said convex corner of said protruding portion and Ry

represents a curvature radius of said concave corner of said recessed portion.